

A CHECKLIST OF FLOWERING PLANTS OF THE SIMPSON DESERT AND ITS IMMEDIATE ENVIRONS

by D. E. SYMON*

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SUMMARY

A checklist is given of 353 species of flowering plants from the Simpson Desert and its immediate environs. A total of 180 species has been collected from the sand dune desert proper and an appendix lists 25 species most closely associated with the upper slopes and dune crests. Five species of alien plants *Cenchrus ciliaris* Buffel Grass, *Emex australis* Three Cornered Jack, *Ricinus communis* Castor Oil, *Mulva parviflora* Mallow and *Citrullus colocynthis* Colocynth have been collected to date, all from the general vicinity of Andado Station.

INTRODUCTION

In 1946 Miss C. M. Eardley published (Trans. R. Soc. S. Aust. 70, 145) a catalogue of plants collected by the 1939 Simpson Desert Expedition. The list was divided into plants of "the desert proper" (Camp 5 to Camp 19) which was the area covered between the remnants of the Hale River in the north-east and the Mulligan on the eastern edge of the desert. The rest of the list included all other plants collected from the approaches to the desert.

It is obviously not easy to define very precisely this desert within a desert, but the term Simpson Desert is often considered to refer to the great sand dune desert. This receives the Todd, Hale and Hay rivers in the north which give rise to localised water courses and flood plains. On the western side the desert is bordered by the last reaches of the Finke River whose braided remnants thread between the dunes in places. In the vicinity of Andado Station the stony tableland extends into the margins of the desert. On its eastern side the desert is bordered by the Mulligan and Eyre Creek and on the south and south-east by the Kallakoopah and the Warburton above which are many saline and sub-saline claypans and flats.

In the following account many plants from the margins of the desert are included, but those found in the sandridge desert (dunes and flats) and away from marginal intrusions are marked with an asterisk (a total of 180 species). In addition an appendix lists those species most closely associated with the upper slopes of the dunes and the dune ridges, a total of 25 species.

It will be seen that the collecting sites have not been well distributed over the desert and that the areas in the centre, the north-east and the southern margins of the desert have not been well collected.

It has not been possible to examine and check all the many specimens so widely distributed. The list is compiled from the original lists of the Crocker collections, from collecting books supplied by the Alice Springs herbarium, and from lists of the collections made by Lothian and Hill, Boyland, Must and Beaughole. To all these contributors I am most grateful.

All the species listed are described in Black 1943-1957, or in Eichler 1965 except those few which are individually given a reference to the original source of publication of the name.

* Waite Institute, University of Adelaide.

COLLECTORS

The Collectors included in this paper, the areas in which they worked, and their collecting numbers are as follows.

R. L. Crocker crossed the desert with the Simpson Desert Expedition in June 1939 from Andado Station to Birdsville. For details of this journey see Madigan 1945, Crocker 1946, and Eardley 1946, and for an earlier short account of the Simpson Desert and its surroundings see Madigan 1938. The specimens collected are housed at the State Herbarium, Adelaide (AD) and the specimens are quoted by Camp number, e.g. C5. A map of the desert and its surroundings will be found in Madigan 1938, a further map and route of the Expedition in Madigan 1946, and a vegetation map in Crocker 1946.

R. E. Winkworth collected in the north-western part of the desert in October, 1954. His localities and numbers are as follows:

113 km. (70 m.) S.E. of Ringwood Headstation	No. 627-649
113 km. (70 m.) S.E. of Ringwood Window Hill	650-659, 661
64.4 km. (40 m.) S.E. of Ringwood	660
40.1 km. (25 m.) S.E. of Ringwood	662
32.1 km. (20 m.) S.E. of Ringwood	663-670
8.0 km. (5 m.) S.E. of Ringwood	671

N. Forde and *G. M. Chippendale* collected in the north-western parts of the desert in September 1955 using separate numbers.

(A) *N. Forde*

Hale River	1264
6.4 km. (4 m.) N of Nummery H.S.	1265-1266
9.7 km. (6 m.) S of Nummery H.S.	1267
11.3 km. (7 m.) S of Nummery H.S.	1269-1273, 1277-1284
	1292-1293
113 km. (70 m.) S.E. of Ringwood	1274-1276
Window Hill	1285-1291, 1295
1.6 km. (1 m.) S of Nummery H.S.	1296
97 km. (60 m.) S.E. of Ringwood	1297-1300
100 km. (62 m.) S.E. of Ringwood	1301-1310
88 km. (55 m.) S.E. of Ringwood Hale River Crossing	1311-1319
105 km. (65 m.) S.E. of Ringwood	1320-1323
56.3 km. (35 m.) S.E. of Ringwood	1324-1325
32.1 km. (20 m.) S.E. of Ringwood	1326
4.8 km. (3 m.) S.E. of Ringwood	1329

(B) *G. M. Chippendale*

Hale River	1589-1593
97 km. (60 m.) S.E. of Ringwood H.S.	1594-1602
Window Hill	1603-1626
75.7 km. (47 m.) S.E. of Ringwood H.S.	1627-1630
64.4 km. (40 m.) S.E. of Ringwood Hale River	1631-1644
29 km. (18 m.) N.W. of Hale River	1645-1648
22.5 km. (14 m.) S.E. of Ringwood H.S.	1649-1650

G. M. Chippendale visited and collected on the western edge of the desert in September 1956. His sites and collecting numbers follow:

Andado (old head station)	2818
33.7 km. (21.6 m.) N. of Andado	2819-2827
1.3 km. (0.8 m.) N of North Bore, Andado	2828-2829
42.8 km. (26.7 m.) N of Andado H.S.	2830
19.3 km. (12.4 m.) N of Andado H.S.	2831
17.7 km. (11.4 m.) N of Andado H.S.	2832
Andado H.S.	2833
Indinda Bore, Andado	2834, 2836
17.7 km. (11 m.) S.W. of Andado H.S.	2837-2841
22.5 km. (14 m.) S.W. of Andado H.S.	2842

23.3 km. (14.5 m.) S.W. of Andado H.S.	2843-2845
46.6 km. (29.2 m.) S.W. of Andado H.S.	2846-2850
91.3 km. (57 m.) S.S.W. of Andado (Boundary Gate)	2851-2852

G. M. Chippendale and *L. A. S. Johnson* revisited the Andado area again in October 1957.

G. M. Chippendale

46.6 km. (29 m.) W of Andado (Old Andado H.S.)	3941-3944
48.6 km. (30.2 m.) N of Andado (North Bore)	3945-3946
20.8 km. (12.9 m.) S of Andado	3947-3949
38.5 km. (24.1 m.) S of Andado	3950-3952
62.8 km. (38.8 m.) N.E. of Charlotte Waters	3953

G. M. Chippendale revisited the Simpson Desert again in 1958 and 1959; September 1958—northern area.

0.8 km. (0.5 m.) N.W. Hale River near Simpson Desert	4927
Bottom Bore, Nummerie, Hale River	4928-4930
11.8 km. (7.3 m.) S.E. Bottom Bore Hale River	4931
12.5 km. (7.8 m.) S.E. Bottom Bore Hale River	4932
14.5 km. (9 m.) S.E. Bottom Bore Hale River	4933-4935
20.9 km. (13 m.) S.E. Bottom Bore Hale River	4936-4937, 4952
27.3 km. (17 m.) S.E. Bottom Bore Hale River	4938
30.6 km. (19 m.) S.E. Bottom Bore Hale River	4939-4941
41.8 km. (26 m.) S.E. Bottom Bore Hale River	4942
53.1 km. (33 m.) S.E. Bottom Bore Hale River	4943-4945, 4948
58.0 km. (36 m.) S.E. Bottom Bore Hale River	4946-4947
62.8 km. (39 m.) S.E. Bottom Bore Hale River	4949
63.6 km. (39.5 m.) S.E. Bottom Bore Hale River	4950-4951
17.7 km. (11 m.) S.E. Bottom Bore Hale River	4953
12.9 km. (8 m.) S.E. Bottom Bore Hale River	4954
20.9 km. (13 m.) Ringwood H.S.	4955-4962

Andado again in September, 1959—western edge.

127.5 km. (79 m.) N of Andado H.S.	6574-6582
121.0 km. (73 m.) N of Andado H.S.	6583-6587
109.9 km. (68 m.) N of Andado H.S.	6588-6589
105.0 km. (65 m.) N of Andado H.S.	6590-6592
100.2 km. (62 m.) N of Andado H.S.	6593-6594
92.9 km. (58 m.) N of Andado H.S.	6595-6598
74.1 km. (46 m.) N of Andado H.S.	6599-6603
61.2 km. (38 m.) N of Andado H.S.	6604
74.1 km. (46 m.) S.W. of Andado H.S.	6605-6609

T. R. N. Lothian and *R. Hill* collected on the western edge of the desert approximately due east of Dalhousie Springs Station on road made by the French Oil Search Company between August 9-12 1963. Their base camp was just within the borders of the dune desert.

Base Camp between dunes 3-4	1407-1508
Gibber plain between dunes 2-3	1509-1530
Flats between dunes 3-4	1531-1592
30.6 km. (19 m.) E of base camp, high dunes, deep valleys, deep sand	1593-1622
48.3 km. (30 m.) E of base camp, flat between dunes, little or no sand	1623-1656
48.3 km. (30 m.) E of base camp, dunes, deep sand	1657-1700
35.3 km. (22 m.) E of base camp, sand dunes	1701-1753
16.1 km. (10 m.) E of base camp, sand	1754-1763
35.3 km. (22 m.) E of base camp, sand	1764-1775
9.7 km. (6 m.) E of base camp consolidated sand, slopes and flat	1776-1781
Base camp	1782
11.3 km. (7 m.) E. of base camp then 2 m. along dune trough, consolidated sand	1783-1831
3.2 km. (2 m.) E of base camp, clay pan between dunes	1832-1860
Gibber plain between dunes 3-4	1861-1870
Dune No. 3 near base camp	1871-1885
Gibber plain at base camp	1886-1898

D. Boyland collected on the S.E. corner of the desert in September 1966.

74.1 km. (46 m.) S.S.E. of Poeppel Corner, sandy clay near salt lake	230-233
48.3 km. (30 m.) S.S.E. of Poeppel Corner, interdune flat	234
Poeppel Corner, sandy clay on salt lake	235-236
Poeppel Corner, sandy soil edge of salt lake	236A-245
Poeppel Corner, sandy soil interdune flat and slopes	246-286
144.8 km. (approximately 90 m.) W.N.W. of Birdsville	287-293
113.0 km. (approximately 70 m.) W.N.W. of Birdsville	294-297
89.7 km. (approximately 56 m.) W.N.W. of Birdsville	298-322

D. Symon collected at the Amerada Petroleum Corporation No. 1 Hale River drilling site at 25° 15' 50"S, 136° 43' 35"E in November 1966. This area is approximately 129 km. (80 m.) W of the Queensland border and 129 km. (80 m.) E of Andado Station and is almost in the centre of the great sand dune desert. Collecting numbers 4331-4405.

Mr. A. C. Beaughlehole of Portland, Victoria, collected in the Andado Station area in July 1968. One set of his specimens has been sent to the herbarium at Alice Springs and duplicates of some other genera have been distributed as follows:

Bassia and *Zygophyllum* at AD, State Herbarium, Adelaide, and
Cassia and *Solanum* at ADW, Waite Herbarium, Adelaide.

For brevity his collections are cited as ACB and his collecting sites and numbers are as follows:

109.7 km. (68.2 m.) N.N.W. of Old Andado H.S., 1.6 km. (1 m.) N.N.W. of Bench mark 394	27751-27764
106.7 km. (66.3 m.) N.N.W. of Old Andado H.S., 1.4 km. (.9 m.) S.S.E. of Bench mark 394	27774-27796
103.7 km. (64.5 m.) N.N.W. of Old Andado H.S., about Bench mark 395	27796A-27843
91.7 km. (57 m.) N.N.W. of Old Andado H.S., 1.6 km. (1 m.) N.N.W. of Bench mark 398	27843A-27878
75.6 km. (47 m.) N.N.W. of Old Andado H.S., bore and dam at Bench mark 69/41, 400	27885-27890
69.5 km. (43.2 m.) N.N.W. of Old Andado H.S., 4.3 km. (2.7 m.) S.S.E. of Bench mark 401	27893-27894
53.2 km. (33.2 m.) N.N.W. of Old Andado H.S., 9.0 km. (5.6 m.) N.N.W. of Bench mark 404	27900-27908
42.1 km. (26.2 m.) N.N.W. of Old Andado H.S., 2.2 km. (1.4 m.) S.S.E. of Bench mark 404	27910-27911
30.2 km. (18.8 m.) N.N.E. of Old Andado H.S., about 16.1 km. (10 m.) N.N.E. of Bench mark 408	27916-27928
17.2 km. (10.7 m.) N.N.W. of Old Andado H.S., about Bench mark 408	27930-27946
Old Andado H.S. area	27947-27967
15.3 km. (8.9 m.) W. of Old Andado H.S., 5.0 km. (3.1 m.) E. of New Andado H.S.	27976-28015A
3.2 km. (2 m.) W. of New Andado H.S.	28016-28033B
43.4 km. (27 m.) S.W. of New Andado H.S., 1.6 km. (1 m.) N.E. of mill and bore	28034-28037

Miss J. Must, *Mr. D. Nelson* and *Mr. J. R. Maconochie* of the Animal and Agriculture Industry Branch of the Northern Territory Administration, Alice Springs, collected at a site 22-27 km. (14-17 m.) north of Andado homestead in July and August 1968. The collection is listed under the collecting numbers of Miss Must. The specimens are deposited at the herbarium at Alice Springs (NT) with some duplicates at ADW. The area is outside the stony tablelands and is right in the dune system. The collecting numbers and dates are as follows:

Miss J. Must	Nos. 48-119 11.7.1968
	Nos. 314-342 8-12.8.1968

The specimens collected by Winkworth, Ford and Clippendale are mainly at the Herbarium at Alice Springs (NT) (Northern Territory) but with many

duplicates at Canberra. The specimens of Crocker, Lothian and Hill are at the State Herbarium Adelaide (AD), those collected by Symon are at the herbarium of the Waite Institute (ADW) with duplicates at AD and elsewhere. The specimens collected by Boyland are at the State Herbarium, Brisbane (BRI).

FLOWERING PLANTS OF THE SIMPSON DESERT AND ITS IMMEDIATE ENVIRONS

CHECKLIST

(* = plants found in the actual sandridge desert)

TYPHACEAE

Typha domingensis Pers. Leafy specimen only of this aquatic herb. ACB. 27963.

RUPPIACEAE

Ruppia spiralis L. ex Dum. An aquatic plant from channel of the Hale River, Crocker (as *R. maritima*).

JUNCAGINACEAE

Triglochin calcitrapa Hook. A small erect annual. Lothian 1533. ACB. 27839, 27906, 27924.

Triglochin calcitrapa var. *isingiana* Black. A small erect annual. Chippendale 2841; Lothian 1533. ACB. 27906, 28002.

Triglochin centrocarpa Hook. A small erect annual. These three *Triglochins* are all closely related. ACB. 27931, 28008.

POACEAE (Gramineae)

**Aristida contorta* F. Muell. (*A. arenaria* Gaud.). An annual or short-lived perennial collected on hard soil on an interdune flat. Lothian 1546, 1631, 1862, Must 55, 341.

**Aristida browniana* Henr. An annual or short-lived perennial often a dominant grass on flats and slopes between the dunes, widely collected. Crocker C1, C3; Chippendale 1600, 6578; Lothian 1676, 1747, 1827; Boyland 266, 313; Symon 4379; Must 53; ACB. 27756.

Brachiaria milliformis (Presl.) Chase. A short-lived perennial. ACB. 27780.

Brachiaria praetervisa (Domin) Hubbard. An annual grass from the flood plain of the Hale River. Crocker.

Cenchrus ciliaris L. An alien perennial pasture grass. ACB. 27965.

Chloris acicularis Lindl. A tall perennial grass apparently rare in the desert. Forde 1291. ACB. 27855.

Chloris pectinata Benth. A tussock perennial grass. ACB. 27997.

Cynodon dactylon (L.) Pers. A stoloniferous perennial. ACB. 27959.

Dactyloctenium radulans (R.Br.) Beauv. A sprawling annual, not common here, collected from interdune claypan flats. Lothian 1583, 1835, 1860. ACB. 27784, 27833, 27911, 28014.

**Danthonia bipartita* F. Muell. A perennial tussock grass. Must 58, 320.

Dichanthium humilius J. M. Black. A small tufted annual, not common. Crocker C3; Forde 1295.

Dichanthium sericeum (R.Br.) Camus. An erect perennial tussock grass. Lothian 1850.

Digitaria ammophila (F. Muell.) Hughes. A tufted perennial grass. Winkworth 654; Lothian 1558.

- Digitaria brownii* (R. and S.) Hughes. A tussock perennial, locally common on a rock outcrop. Winkworth 636; Must 337.
- Diplachne fusca* (L.) Beauv. An erect perennial tussock grass. Crocker (As *D. muelleri*); Lothian 1542, 1559; ACB.27805, 27998.
- **Enneapogon avenaceus* (Lindl.) Hubbard. An annual grass from interdune flats or in deep red sand. Crocker; Chippendale 6579; Lothian 1571, 1627, 1858; ACB.27802.
- **Enneapogon cylindricus* Burbidge. An erect tufted perennial from sandy soil on an interdune flat. Lothian 1570; Boyland 259; Must 57.
- **Enneapogon polyphyllus* (Domin.) Burbidge. Common or occasional on flats between the dunes. Crocker C3; Chippendale 1622; Symon 4346.
- Eragrostis concinna* Steud. An annual, very variable in size. ACB.27828, 27990.
- **Eragrostis dielsii* Pilger. A prostrate annual or short-lived perennial occasional on deep red sand from interdune flat areas. Crocker C2, C3; Chippendale 6580; Lothian 1803, 1829, 1833, 1864; Boyland 236; ACB.27810, 27977.
- **Eragrostis eriopoda* Benth. A tough tussocky perennial very common on the flats and slopes and in places a dominant grass. Crocker C8, C16; Symon 4347, 4383; Must 330, 332; ACB.27846.
- Eragrostis kennedyae* F. Turner. A tussock perennial. ACB.27993.
- **Eragrostis laniflora* Benth. A tussock perennial on some interdune flats. Crocker C1; Winkworth 630; Lothian 1715.
- Eragrostis leptocarpa* Benth. A slender annual, variable in size. ACB.27801, 27843, 28009.
- **Eragrostis setifolia* Nees. A tussock perennial similar in plant form to the two species above, collected from clayey sandy soil on an interdune flat. Crocker C3; Forde 1293; Chippendale 2824; Lothian 1569; Boyland 300; ACB.27776, 27803.
- **Eragrostis xerophila* Domin. A perennial tussock grass. Must 54, 336.
- **Eriachne aristidea* F. Muell. An erect annual common on the upper slopes and crests of the sand ridges and on deep sand. Crocker C2; Chippendale 1624; Lothian 1462, 1666, 1753, 1800, 1816; Boyland 260; Symon 4348; Must 338; ACB.28013.
- Eriachne benthamii* Hartley. A perennial tussock grass. ACB.27996.
- Eriachne helmsii* (Domin) Hartley. Rare on loose sandy soil in interdune areas. Winkworth 658.
- Iseilema eremaicum* Blake. A small annual grass. Lothian 1574.
- Neurachne muelleri* Hack. Must 323.
- **Panicum australiense* Domin. A small tufted annual not common. Crocker (as *Ichuanthus*); Symon 4377.
- Panicum decompositum* R.Br. A tussock perennial from interdune clay flat. Crocker C3; Winkworth 653.
- **Plagiosetum refractum* (F. Muell.) Benth. An annual common and widespread along the upper slopes and dune crests, widely collected. Crocker; Forde 1269, 1276; Chippendale 6587, 6609; Lothian 1617, 1677, 1697, 1736, 1792; Boyland 311; Symon 4357; Must 325; ACB.27864.
- **Setaria* sp. (? *S. brownii* Herrm. in Rosen, Beitr. Biol. Pflanzen 10:61 (1910)). An annual grass. Crocker C18; Forde 1298.
- Sporobolus actinocladius* (F. Muell.) F. Muell. An erect annual or short-lived perennial. ACB.27982.
- Tragus australianus* Blake. A small sprawling annual grass. Lothian 1573, 1831; ACB.27831.

**Triodia basedowii* Pritzel. A widespread, pungent leaved, hummocky perennial, very common on flats and slopes and one of the dominant grasses of the desert. Crocker C8, etc.; Lothian 1468; Boyland 314; Symon 4382; Must 52; ACB. 27858.

Tripogon loliformis (F. Muell.) Hubbard. A small tufted perennial. ACB. 27827.

**Tritaphis mollis* R.Br. An annual common or occasional on flats and dune slopes. Crocker C3; Forde 1271; Chippendale 1599; Lothian 1412, 1463, 1503, 1636, 1748, 1801, 1863; Boyland 234; Symon 4389; Must 56; ACB. 27757, 27795.

**Zygochloa paradoxa* (R.Br.) Blake. A perennial forming a tough tangled clump, a dominant grass and important sand binder on the upper slopes and ridges of the dunes. Many other plants get some shelter from this widespread species. Crocker C3; Winkworth 631; Forde 1272; Chippendale 1596, 2833; Lothian 1459, 1661, 1883; Boyland 279; Symon 4360; Must 59; ACB. 27754.

CYPERACEAE

Cyperus bulbosus Vahl. A perennial sedge, producing small bulbils. Crocker C3, C4.

Cyperus gilesii Benth. A graceful annual sedge. ACB. 27992.

Cyperus iria L. An annual sedge. ACB. 27989.

Cyperus squarrosus L. A small erect annual sedge. Crocker C4, etc. (As *C. aristatus* Benth.); ACB. 28004.

Fimbristylis dichotoma (L.) Vahl. A tufted perennial, apparently rare in the desert. Crocker C19; ACB. 27813, 28010.

CENTROLEPIDACEAE

Centrolepis polygyna (R.Br.) Hieron. A very small annual. ACB. 28007.

LILIACEAE

**Anguillaria dioica* R.Br. A small erect bulbous plant. ACB. 27979; Must 69.

**Bulbinopsis semibarbata* (R.Br.) Borzi. An annual or ephemeral apparently rare on hard clay flats between dunes. Lothian 1493, 1578, 1652, 1857; ACB. 27835, 27902.

Corynotheca lateriflora (R.Br.) Benth. An unexpected record, the specimens are not ideal and more material is needed for confirmation. On deep interdune sands. Lothian 1671, 1680.

PROTEACEAE

**Grevillea juncifolia* Hook. A large shrub or small tree (3 m.) occurring on interdune flats. In 1966 many were dead as a result of the long drought, but many new seedlings were seen. Crocker C6-8; Lothian 1477, 1701, 1720; Boyland 319; Symon 4365, 4392.

**Grevillea stenobotrya* F. Muell. A medium sized (1-1.5 m.) shrub, occasional on the interdune slopes. Crocker C5, C6, C7, C12, C13; Symon 4366.

**Grevillea striata* R.Br. A small tree apparently rare in interdune areas. Crocker C5; Winkworth 645.

**Hakea divaricata* Johnson. (*H. intermedia* Ewart and Davies). A small tree, apparently rare. Crocker C7, C10; Boyland 317; Must 110.

**Hakea leucoptera* R.Br. A shrub or small tree in open grassland. Crocker C1, C2, C8; Winkworth 663; Forde 1299; Lothian 1469; Boyland 251.

SANTALACEAE

Santalum lanceolatum R.Br. A shrub or small tree very rare in the desert. Crocker C3; Winkworth 637; Boyland 312.

LORANTHACEAE

Amyema maidenii (Blakely) Barlow. A parasite on *Acacia aneura* and *cambagei*. Crocker (as *Loranthus maidenii*) C3; Boyland 288.
Lysiana exocarpi (Behr.) Tiegh. Parasite on *Acacia peuce*. Crocker (as *Loranthus exocarpi*); Chippendale 2829 (lost or mislaid).
Lysiana spathulata (Blakely) Barlow. Parasite on *Acacia kempeana*. Forde 1279 (as *Loranthus exocarpi* var. *spathulata*); ACB.27764, 27821.

POLYGONACEAE

Emex australis Steinh. An alien annual herb. ACB.27959.
Muehlenbeckia cunninghamii (Meisn.) F. Muell. An intricate tangled sprawling shrub often associated with waterways and flood plains; Crocker; Lothian 1874; Boyland 309; ACB.27820.
Rumex crystallinus Lange. An erect annual or short-lived perennial. ACB. 27955.

CHENOPODIACEAE

Atriplex angulata Benth. A small perennial shrub on a flood plain. Chippendale 2827; ACB.27920.
Atriplex campanulatum Benth. A sprawling herb. ACB.27995.
Atriplex conduplicata F. Muell. Austral. J. Pharm. 429 (1886). A small shrub or herb on flood plain. Chippendale 2826.
Atriplex crassipes J. M. Black. A small erect annual or short-lived perennial. ACB.27916.
Atriplex elachophylla F. Muell. A small annual in the shelter of trees and in red sand. Winkworth 652; Chippendale 1621.
Atriplex fissivalois F. Muell. A small herb on stony gibber flat. Lothian 1865.
Atriplex holocarpa F. Muell. A small herb on flood plain or interdune flat. Chippendale 2852, 3950; Lothian 1549.
 **Atriplex limbata* Benth. A sprawling herb on interdune flats. Lothian 1421, 1711; Boyland 248.
Atriplex lindleyi Moq. An annual herb. Forde 1333.
Atriplex muelleri Benth. Sprawling annual herb. ACB.27961.
Atriplex nummularia Lindl. A perennial shrub 1-3 m. tall on flood plain or stony interdune flat. Chippendale 2851, 4937; Lothian 1523.
 **Atriplex spongiosa* F. Muell. An annual herb in depressions or on stony plain. Chippendale 3951, 4952; Lothian 1549; Boyland 238; ACB.27819.
Atriplex velutinella F. Muell. A sprawling annual or short-lived perennial. ACB.27938.
 **Atriplex vesicaria* Heward ex Benth. A shrubby perennial collected from stony rises or interdune flats. Crocker C2; Forde 1313, 1318; Lothian 1650; Chippendale 1639, 1642, 1613, 4941; Boyland 233, 245.
Babbagia acroptera F. Muell. and Tate. A small perennial shrub collected from stony or hard interdune flats. Crocker C20; Lothian 1528, 1638, 1844.
Babbagia dipterocarpa F. Muell. A small perennial shrub locally common on flood plain and rare on stony plain. Chippendale 2819, 3946; ACB.27939.
Bassia andersonii Ising. A perennial herb infrequent on stony plain in clayey red soil. Chippendale 3942; ACB.27824.

- **Bassia bicornis* (Lindl.) F. Muell. A small shrub from clayey sandy soil of interdune flat. Crocker, Chippendale 6591; Lothian 1526, 1554; Boyland 320; ACB.27818.
- Bassia calcarata* Ising. A small sprawling undershrub. ACB.27917.
- Bassia convexula* Anderson. A small grey shrub common in red sandy flat. Winkworth 650; Chippendale 3939; Must 85; ACB.27886.
- Bassia cornishiana* F. Muell. A woolly leaved, spiny fruited perennial. Must 108.
- Bassia decurrens* Black. A compact small shrub. ACB.27980.
- **Bassia diacantha* (Nees) F. Muell. A sprawling annual or short-lived perennial from hard soil on interdune flats. Crocker; Lothian 1644, 1649, 1708; Boyland 240; ACB.27823.
- Bassia divaricata* (R.Br.) F. Muell. A small shrub locally common in sandy soil in shelter of trees. Chippendale 4960; Lothian 1525.
- **Bassia eremaea* Ising. A small shrub from interdune flat. Lothian 1645.
- Bassia eriakantha* (F. Muell.) Anderson. A small shrub from stony areas. Forde 1315; Chippendale 3948; Lothian 1887.
- **Bassia intricata* Anderson. Locally common on flood plain and on stony red soils, a small intricate shrub. Crocker; Chippendale 2825, 3941, 4918; Lothian 1525, 1562; Boyland 239.
- Kochia aphylla* R.Br. An intricate small shrub occasional on interdune flood plain. Chippendale 2830; Lothian 1890; ACB.27799.
- Kochia coronata* J. M. Black. A small sprawling shrublet locally common on flood plain. Chippendale 2822, 3943; Lothian 1527; ACB.27918.
- Kochia georgei* Diels. A small stout shrub on stony rise and plain, locally common. Forde 1314, 1328; Chippendale 1640, 2843, 3949; Lothian 1888.
- **Kochia lanosa* Lindl. A small sprawling shrub, apparently not common. Crocker C11.
- Kochia microcarpa* (Benth.) Wilson. A sprawling short-lived perennial. ACB. 28020.
- Kochia spongicarpa* F. Muell. A dwarf grey shrub, rare in clayey red soil on stony plain. Chippendale 3944.
- Kochia tomentosa* F. Muell. A small shrub infrequent near small stony water-course. Crocker C3; Forde 1323; Chippendale 4959.
- Kochia triptera* Benth. A small shrub. ACB.27787.
- **Pachycornia tenuis* (Benth.) Black. A small intricate shrub from sandy soil at the edge of a salt lake. Crocker C2; Chippendale 2831, 4943; Boyland 241; ACB.27816.
- **Rhagodia spinescens* R.Br. var. *deltophylla* (F. Muell.) Black. A sprawling shrub on deep firm sand or dune slopes. Crocker; Lothian 1444, 1812; Symon 4370; ACB.27788.
- **Salsola kali* L. and var. *strobilifera* Benth. An intricate rounded annual from deep sands. Crocker C2, C5; Lothian 1512, 1513, 1561, 1647, 1871; Boyland 246; Symon 4400; Must 86; ACB.27763.
- Threlkeldia proceriflora* F. Muell. An erect undershrub. ACB.27919.
- **Bassia johnsonii* Ising. An intricate perennial undershrub on swale flats. Must 107; ACB.27861.
- **Bassia lanicuspis* (F. Muell.) F. Muell. A dwarf shrub, locally common on stony rise to infrequent in sandy loam. Forde 1316, 1321; Chippendale 1641, 4962; Lothian 1514, 1555, 1642, 1646, 1648; ACB.27809.
- **Bassia paradoxa* (R.Br.) F. Muell. An annual or small, short-lived shrub occasional in sandy loam to common on stony interdune flat. Crocker; Chippendale 1628, 4961, 6590; Lothian 1411, 1557, 1866; ACB.27826.

- Bassia parallelicuspis* Anderson. An annual or small shrub on interdune flat. Lothian 1548, 1556.
- **Bassia quinquecuspis* (F. Muell.) F. Muell. A small shrub or annual from interdune flats. Chippendale 3940; Symon 4394 (as var. *villosa*).
- **Chenopodium auricomum* Lindl. An erect small shrub, locally common on flood area. Forde 1329; Chippendale 2834; Boyland 299; ACB.27941, 27956.
- Chenopodium cristatum* (F. Muell.) F. Muell. A small prostrate annual from interdune flats. Lothian 1446, 1471; ACB.27830, 27967.
- **Chenopodium plantaginellum* (F. Muell.) Aellen. in Engl. Jahrb. 63:487 (1930). From heavy soil near salt lake. Boyland 237.
- Dysphania myriocephala* Benth. A small prostrate annual. ACB.27837, 28011.
- **Euchylaena tomentosa* R.Br. An intricate and sprawling small shrub from sandy interdune flats. Crocker C8, C9; Boyland 247; Must 49; ACB. 27753.

AMARANTHACEAE

- **Amaranthus grandiflorus* (J. M. Black) J. M. Black. An annual herb, apparently not common, from deep interdune sands. Crocker C11; Lothian 1452, 1502, 1599; Must 333; ACB.27794.
- Amaranthus mitchellii* Benth. An erect annual herb. ACB.27791.
- **Ptilotus atriplicifolius* (A. Cunn. ex Moq.) Benl. in Mtt. Bot. Staatssamml. Munchen 2:404 (1958). Collected from heavy deep sands. Lothian 1662, 1806, 1895.
- Ptilotus exaltatus* Nees. Stout, erect, perennial herb from a sandy watercourse. Crocker C2.
- Ptilotus helipteroides* (F. Muell.) F. Muell. A small annual herb from a rocky outcrop near a creek bank. Crocker C4; Winkworth 668; Chippendale 1647.
- **Ptilotus latifolius* R.Br. Very common along the upper slopes of the steep dune face and a primary coloniser of the mobile crests. It can form large (75 cm.) showy white, rounded herbs. Widespread and repeatedly collected. Crocker C10; Chippendale 2846, 6602, 6605; Lothian 1410, 1485, 1615, 1729, 1797, 1818; Boyland 291; Symon 4355; Must 75; ACB.27863, 27930.
- Ptilotus nobilis* (Lindl.) F. Muell. Rare in the desert, in stony ground at the base of hills. Chippendale 4955.
- **Ptilotus obovatus* (Gaudich) F. Muell. An undershrub most common on stony plains and slopes, rarely if ever found on deep sand. Crocker; Winkworth 632; Chippendale 1612, 2845, 4958, 6597; Lothian 1893; Must 81.
- **Ptilotus polystachyus* (Gaudich) F. Muell. (*P. alopecuroides*) and including the form *rubriflorus*. Depending on season a small or large sprawling herb which may be 1 m. high by 2 m. wide. It may be very common on deep sand on the flats and dune slopes. Widespread and widely collected. Crocker C1, C2, C14; Winkworth 649; Chippendale 1623, 6582; Lothian 1433, 1540, 1614, 1653, 1688, 1730, 1805; f. *rubriflorus* 1455, 1490, 1731, 1804; Boyland 283; Symon 4401; Must 80; ACB.27857.

NYCTAGINACEAE

- **Boerhavia diffusa* L. A prostrate annual or perennial herb, on hard interdune flats. Crocker C3; Winkworth 655; Lothian 1634.

GYROSTEMONACEAE

- Codonocarpus cotinifolius* (Desf.) F. Muell. A short-lived tree very rare in the desert. A single tree recorded by Crocker near the Hay River.

- **Gyrostemon ramulosus* Desf. A short-lived shrub or small tree. Must 112, 329; ACB.27845.

AIZOACEAE

- Aizoon quadrifidum* (F. Muell.) F. Muell. An intricate rounded small shrub. ACB.27976.
Glinus lotoides L. A sprawling herb. ACB.27954.
 **Trianthema pilosa* F. Muell. A sprawling mat-forming herb locally common on deep sand flats and slopes. Crocker C2; Lothian 1422, 1445, 1473, 1607, 1696, 1745, 1757, 1826; Symon 4345; Must 116.
Trianthema triquetra Willd. A prostrate annual herb on hard flats between dunes. Lothian 1521, 1885.

TETRAGONACEAE

- Tetragonia eremaea* Osteenf. A prostrate annual herb from hard stony interdune flats. Lothian 1518, 1580.

PORTULACACEAE

- Calandrinia* species frequently make most unsatisfactory herbarium specimens due to their extreme succulence and tendency to fall to pieces on drying with the result that accurate determinations are often difficult.
 **Calandrinia balonensis* Lindl. A succulent ephemeral locally common on deep sand between dunes. Symon 4395; Boyland 302; Must 324, 100.
 **Calandrinia disperma* J. M. Black. A sprawling fleshy annual. Must 113.
 **Calandrinia polyandra* Benth. A succulent ephemeral locally common on deep sand. Symon 4396; Must 106.
Calandrinia ptychosperma F. Muell. A prostrate annual rare in the desert on an interdune flat. Lothian 1532; ACB.27838.
Calandrinia pumila (F. Muell. ex Benth.) F. Muell. A small annual also rare in the desert on an interdune flat. Lothian 1537; ACB.27829.
Calandrinia cf. *remota* Black. A succulent annual or ephemeral. Lothian 1505, 1619, 1710, 1762; ACB.27847.
 **Portulaca intralerranea* J. M. Black. A sprawling mat-forming herb up to 1 m. across, common on the consolidated sides of dunes and lower slopes. Crocker C2; Winkworth 642; Chippendale 1614; Lothian 1451, 1486, 1506, 1618, 1687, 1691, 1751, 1872; Boyland 263, 322; Symon 4397; Must 339.
Portulaca oleracea L. A small mat-forming succulent herb on interdune flats. Lothian 1502 p.pt. 1592; ACB.27891.

BRASSICACEAE (CRUCIFERAE)

- **Arabidella eremigena* (F. Muell.) Shaw. An annual herb from clayey sandy soil on an interdune flat. Boyland 295 (as *Blennodia eremigena*).
Arabidella procumbens (Tate) Shaw. A slender prostrate annual. ACB.27908.
 **Blennodia canescens* R.Br. An annual herb from the sides of a dune. Winkworth 634; Must 67.
 **Blennodia pterosperma* (Black) Black. An annual herb common along the upper slopes of the dunes and forming a fringe along the sides of the unstable crests. Crocker C11; Chippendale 1610; Boyland 281; Symon 4358; Must 65.
 **Harmsiodoxa blennodioides* (F. Muell.) Schulz. An annual herb from interdune flats. Boyland 303 (as *Blennodia lasiocarpa*).
Lepidium muelleri-ferdinandi Thell. A small annual only once collected from an interdune flat. Lothian 1551.

**Lepidium rotundum* DC. A small annual herb on interdune flats. Chippendale 6581; Lothian 1427, 1443, 1496, 1589, 1819; Boyland 258; Symon 4332; Must 114.

**Stenopetalum lineare* var. *canescens* Benth. An erect annual herb from hard interdune flats. Lothian 1418, 1581, 1626, 1655, 1773, 1848; Must 77.

CRASSULACEAE

Crassula colorata (Nees) Ostenf. A very small succulent annual. Lothian 1531; ACB.27991.

PITTOSPORACEAE

Pittosporum phylliraeoides DC. An erect shrub or small tree from small creek-line, often colonial. Forde 1326; Chippendale 1650.

MIMOSACEAE

Acacia aneura F. Muell. ex Benth. A small tree on stony interdune flat. Winkworth 628; Lothian 1565; Must 101.

**Acacia brachybotrya* Benth. A shrub on sand or interdune flat. Boyland 254.

**Acacia brachystachya* Benth. A tree on consolidated interdune sands. Crocker C2; Lothian 1809.

**Acacia cambagei* R. T. Baker. A tree on sandy flat, flood plain. Crocker; Boyland 249.

**Acacia dictyophleba* F. Muell. A colonial shrub or small tree on deep sand slopes or ridges, one of the most widespread species in the desert. Crocker C6, C7; Chippendale 4951; Lothian 1442, 1467, 1491, 1604, 1694, 1743; Boyland 256; Symon 4375; Must 99.

Acacia estrophiolata F. Muell. A slender, graceful, small or large tree infrequent on deep sand or flats. Crocker C3; Chippendale 4953, 6589.

Acacia georginae F. M. Bailey. Bot. Bull. 13:9. A tree locally common in sandy loam of flood plain. Chippendale 1590, 4936.

Acacia kempeana F. Muell. A large shrub locally common on ridge. Crocker C2; Chippendale 1604; Must 96.

Acacia leptopetala Benth. A shrub or tree. Forde 1265.

**Acacia ligulata* A. Cunn. ex Benth. A colonial, large or small shrub. One of the commonest species in the desert, on deep sand on flats and on dune slopes. Crocker C1, C2, C6; Forde 1284; Chippendale 4930; Lothian 1431, 1488, 1612, 1663, 1721, 1724; Boyland 252; Symon 4359, 4367.

**Acacia linophylla* W. V. Fitzgerald. A tall shrub from interdune flats. Lothian 1441, 1498, 1664, 1718, 1791.

**Acacia maitlandii* F. Muell. (*A. patens* F. Muell. ex Benth.) A shrub. Crocker C6, C8.

**Acacia murrayana* F. Muell. ex Benth. A large shrub or small tree on deep sand. Crocker C6; Chippendale 2847, 4928, 6583; Lothian 1472, 1593, 1667; Boyland 253, 289; Must 331.

Acacia peuce F. Muell. An erect tall tree restricted in distribution to near Andado on the stony plain and also found near Birdsville. Crocker; Chippendale 2828, 3945.

**Acacia ramulosa* W. V. Fitzgerald. A large shrub or small tree from interdune sands. Boyland 292.

Acacia sessiliceps F. Muell. A shrub to 3 m. rare on floodout. Chippendale 1633.

**Acacia tetragonophylla* F. Muell. A large shrub or small tree. Lothian 1782; Boyland 316.

- Acacia victoriae* Benth. An intricate small or large tree locally common on stony flat. Winkworth 638; Forde 1327; Chippendale 1649; Lothian 1508.
Acacia ? *wattsiana* F. Muell. ex Benth. A small shrub. Crocker C17.

CAESALPINIACEAE

- Bauhinia carronii* F. Muell. A tree from the Eyre Creek, Kaliduwarry Station. Crocker C20.
 **Cassia nemophila* Vogel. A woody shrub 1-2 m. tall, at times colonial in habit, on the lower slopes of the dunes or on the interdune flats. Crocker C7, C14; Chippendale 4933, 6595; Lothian 1424, 1492, 1713, 1764; Boyland 308; Symon 4405; Must 97; ACB.27812, 27862.
 **Cassia nemophila* var. *zygophylla* (Benth.) Symon. A medium sized shrub. Symon 4384; Must 50, ACB.27850.
Cassia oligophylla F. Muell. A woody shrub. Chippendale 1603, 4957, 6596; Lothian 1896; ACB.27790, 27848, 27878.
 **Cassia pleurocarpa* F. Muell. A shrub, usually low (to 1 m.), at times colonial and widespread on the interdune flats and dune slopes. Crocker C1, C10, C13; Forde 1294; Chippendale 1626; Lothian 1456, 1670, 1733; Boyland 318; Symon 4368; Must 98; ACB.27874.
Cassia pruinosa F. Muell. A straggly shrub usually found on rocky or stony sites. Chippendale 1635.

FABACEAE (PAPILIONACEAE)

- **Crotalaria cunninghamii* R.Br. A stiffly erect annual or short-lived shrub common along the upper steep slopes of the dunes and in the edge of the loose sand on the crests. Widespread and commonly collected. Crocker C8; Winkworth 627; Forde 1268; Chippendale 1594, 6600; Lothian 1776; Boyland 255; Symon 4356; Must 94; ACB.27870.
 **Crotalaria dissitiflora* Benth. An annual or short-lived willowy herb also found along the upper slopes of the dunes and in deep sand. Widespread and commonly collected. Crocker C8, C15; Forde 1273; Chippendale 1607, 4938; Lothian 1413, 1432, 1487, 1622, 1657, 1702, 1777, 1796, 1807, 1877; Symon 4379; Must 88; ACB.27856, 27950, 28034.
 **Crotalaria eremaea* F. Muell. Rep. Greg. Pl. 5. Collected from the lower slopes of sand ridges. Boyland 270.
Crotalaria mitchellii Benth. A spreading prostrate perennial on loamy soil. Lothian 1534.
 **Crotalaria novae-hollandiae* DC. A perennial herb in sandy loam between ridges. Chippendale 4931, 1616; Lothian 1824.
Crotalaria stehlowii Pritz. A perennial herb, apparently rare on sandridge crest. Crocker; Chippendale 6608.
Glycine canescens Herm. A slender twining herbaceous perennial. Lothian 1409.
 **Indigofera brevidens* var. *uncinata* Benth. Small perennial shrubs. ? Winkworth 646; Lothian 1682, 1704, 1721; Symon 4391; ACB.27935.
Isotropis wheeleri F. Muell. ex Benth. A small slender shrub. Must 48.
Lotus cruentus Court. A prostrate annual herb. Crocker; Lothian 1588, 1839, 1859; ACB.27943.
Psoralea cinerea Lindl. An erect annual. Crocker C20.
 **Psoralea eriantha* Benth. Annual or perennial herb of variable size to 1 m. high along the base of the steep face of the dunes or in deep sand. Crocker C14, C20; Lothian 1454, 1660, 1716, 1727, 1813; Boyland 278; Symon 4362; Must 322.

- **Psoralea patens* Lindl. An erect herbaceous perennial from interdune claypan. Lothian 1840; Chippendale 4932; Boyland 286; ACB.28016.
- Ptychosema trifoliatum* F. Muell. A procumbent slender herb. Must 73.
- Sesbania cannabina* (Retz.) Poir. A slender erect herb. Crocker C20 (as *S. aculeatus*).
- Swainsona burkittii* F. Muell. ex Benth. From the desert margin only, a sprawling perennial. Forde 1308.
- Swainsona flavicarinata* Black. Sprawling herb in deep sand. Chippendale 1619, 1630; Lothian 1511, 1568, 1867, 1892.
- **Swainsona microphylla* ssp. *affinis* A. Lee. A small branching herb on the slopes on deep sand. Crocker C6, C7; Symon 4341; Must 76.
- Swainsona oligophylla* F. Muell. ex Benth. A prostrate annual herb. ACB. 28018.
- Swainsona oroioides* F. Muell. A small annual or herbaceous perennial. Forde 1292.
- **Swainsona parviflora* Benth. Fl. Austral. 2:223. Collected from sandy clay edge of salt lake. Boyland 230.
- **Swainsona phacoides* Benth. Prostrate spreading annual on interdune flats. Crocker C2; Chippendale 1602, 2850, 6584; Lothian 1428, 1765, 1783, 1815, 1843, 1868; Boyland 271; ACB.27933.
- **Swainsona rigida* (Benth.) Black. At first a delicate willowy herb, later more intricate and rigid, along the dune crests. Crocker C17; Lothian 1621, 1659, 1672, 1725; Boyland 290; Symon 4386.
- **Tephrosia* aff. *purpurea* (L.) Pers. A locally common perennial herb along the upper slopes of the dunes. Crocker; Boyland 282; Symon 4371.
- Tephrosia remotiflora* F. Muell. ex Benth. Must 51, 76B.
- **Tephrosia sphaerospora* F. Muell. A perennial herb on the interdune flats. Chippendale 4946; Lothian 1429, 1799, 1830, 1876.
- Trigonella suavissima* Lindl. A small sprawling annual. Lothian 1519; ACB. 27923.

GERANIACEAE

- Erodium aureum* Carolin. A sprawling annual herb. Lothian 1417, 1639, 1656, 1856; ACB.27806.
- Erodium cygnorum* Nees. A vigorous sprawling annual. Forde 1320; Lothian 1817; ACB.28024.
- **Erodium cygnorum* ssp. *glandulosum* Carolin. Chippendale 1644; Lothian 1501, 1587, 1628, 1772, 1849; Boyland 310; Must 60.

ZYGOPHYLLACEAE

- **Nitraria schoberi* L. A large intricate sprawling shrub from sandy clay near edge of salt lake. Boyland 232.
- **Tribulus hystrix* R.Br. A prostrate annual on the upper slopes of the dunes. Chippendale 1606; Lothian 1712; Boyland 280.
- **Zygophyllum ammophilum* F. Muell. An annual herb occurring on the flats or floodouts. Chippendale 1593; Lothian 1416, 1457, 1484, 1633, 1654, 1753, 1821, 1845; Symon 4385; Boyland 244; Must 105; ACB.27871, 27962.
- Zygophyllum compressum* J. M. Black. An erect annual herb. Crocker C20.
- **Zygophyllum howittii* F. Muell. An annual herb from sandy flats. Crocker C2; Forde 1303; Lothian 1453, 1504, 1613, 1690, 1709, 1759, 1788, 1808; Boyland 243; Symon 4404; ACB.27752, 27926.
- Zygophyllum iodocarpum* F. Muell. A diffuse bushy annual. Lothian 1517.

EUPHORBIACEAE

- **Adriana hookeri* (F. Muell.) Mueller-Arg. An erect dioecious perennial herb from interdune flats. Crocker C5, C8; Symon 4369, 4350.
- **Euphorbia drummondii* Boiss. A quite prostrate herb on the flats and slopes. Chippendale 3954; Lothian 15 numbers; Boyland 285, 293; Symon 4364; Must 117, 335; ACB.27865, 27894, 28035.
- **Euphorbia eremophila* A. Cunn. ex Hook. An erect herb, probably annual. Chippendale 1618; Lothian 1408, 1810, 1873, 1891; Boyland 321; Must 102.
- **Euphorbia wheeleri* Baill. A semi-erect sprawling herb often partially engulfed in sand on the dune slopes where it appears to replace *E. drummondii*. Crocker C11; Boyland 262; Symon 4376; Must 104.
- **Glochidion rhytidospermum* (Mueller Arg.) Eichler (as *Phyllanthus rhytidospermum*). A small annual from interdune flats in sand. Winkworth 640; Chippendale 1609, 4945; Boyland 265.
- **Glochidion trachyspermum* (F. Muell.) Eichler (as *Phyllanthus trachyspermus*). A small annual. Lothian 1476, 1497, 1596, 1707, 1738.
- **Phyllanthus fuernrohrrii* F. Muell. A small shrub on flats and slopes. Chippendale 4944, 6586; Boyland 306.
- Ricinus communis* L. An alien shrub or small tree often confined to drainage lines in the arid areas. ACB.27964.

STACKHOUSIACEAE

- Stackhousia viminea* Sm. A slender erect herbaceous perennial. Forde 1309; Lothian 1464.

SAPINDACEAE

- Atalaya hemiglaucula* (F. Muell.) F. Muell. ex Benth. A small tree, not common in the desert and locally found on a dune crest. Winkworth 633.
- **Dodonaea attenuata* A. Cunn. A shrub from sandy soil on interdune flats. Chippendale 4950; Boyland 284; Must 326; ACB.27872.
- **Dodonaea viscosa* Jacq. A shrub or small tree. Crocker C12; Lothian 1723.

TILIACEAE

- **Triumfetta winneckeana* F. Muell. Winnecke Re. (1884) 15. A perennial creeping herb from the dune ridges. Crocker C6, C7, C8.

MALVACEAE

- **Abutilon otocarpum* F. Muell. An erect herbaceous perennial or undershrub, fairly widely collected from deep interdune sands. Winkworth 659; Forde 1281; Lothian 1598, 1780; Symon 4331; ACB.27859.
- Hibiscus farragei* F. Muell. An erect shrub, rare in the desert and only collected once on a flood out. Chippendale 1592.
- **Hibiscus krichauffianus* F. Muell. A small shrub from dune slopes. Crocker C1 etc.; Chippendale 2848; Lothian 1750, 1779.
- **Lavatera plebeia* Sims. A perennial herb. Crocker C20; Boyland 301A.
- Malva parviflora* L. An alien annual herb. ACB.27951.
- **Sida corrugata* Lindl. A variable small shrub on interdune flats. Crocker C20; Chippendale 1613; Boyland 250; Symon 4373; ACB.27775.
- **Sida cunninghamii* White. A small undershrub. Lothian 1698, 1837; Boyland 257.
- Sida platycalyx* F. Muell. ex Benth. A small undershrub, not common on inter-dune area. Crocker C1-2; Winkworth 639; ACB.27786.

Sida trichopoda F. Muell. A small undershrub collected from a floodplain. Chippendale 2823; ACB.28019.

- **Sida virgata* Hook. A small erect shrub, variable, from interdune flats and slopes. Crocker C13; Chippendale 1625; Lothian 1470; Symon 4378; ACB.27984.

STERCULIACEAE

Gilesia biniflora F. Muell. A small prostrate perennial apparently rare in the desert. Lothian 1832.

Melhania oblongifolia F. Muell. (*M. incana*). A small shrub, not common, in deep sands. Crocker C2; Forde 1300, 1310; Chippendale 1629.

FRANKENIACEAE

- **Frankenia gracilis* Summerh. A small undershrub locally common on stony hillslope on desert margins. Chippendale 1589, 4927; Boyland 235; ACB. 27936, 27978.

HALORAGACEAE

**Haloragis gossei* F. Muell. An erect annual on interdune deep sands. Crocker C9-10; Lothian 1706, 1719; Symon 4372, 4387; Must 317.

**Haloragis heterophylla* Brongn. A small perennial colonial herb. Crocker C3; Boyland 304.

Myriophyllum verrucosum Lindl. An aquatic plant from the Hale River channel. Crocker.

APIACEAE (UMBELLIFERAE)

Daucus glochidiatus (Labill.) Fisch. Mey. and Ave-Lall. A small erect annual, not common. Lothian 1576, 1838; ACB.28006.

- **Trachymene glaucofolia* (F. Muell.) Benth. An erect annual, variable in size, common on flats and slopes in deep sand. Crocker (as *Didiscus*) C2; Winkworth 657; Chippendale 6588; Lothian nine numbers; Boyland 264; Symon 4337; ACB.27759, 27779, 27877.

CONVOLVULACEAE

**Convolvulus erubescens* Sims. A prostrate herb, annual or perennial. Crocker C3; Chippendale 4954; Lothian 1510, 1564, 1651, 1855; Must 115. ACB. 27781.

**Evolvulus alsinoides* L. A small erect perennial subshrub apparently rare. Forde 1282; Lothian 1448, 1760; ACB.27778.

**Ipomoea heterophylla* R.Br. A prostrate herbaceous perennial. Lothian 1449, 1802.

**Ipomoea muelleri* Benth. A sprawling vine. Crocker C3, C15.

VIOLACEAE

Hybanthus enneaspermus (L.) F. Muell. A small undershrub described as infrequent on stony hillside. Chippendale 1634.

THYMELAEACEAE

**Pimelea trichostachya* Lindl. A small erect annual. Lothian 1420, 1500, 1705.

MYRTACEAE

Eucalyptus—None of the following *Eucalypts* (small or large trees) are common in the sand dune desert and most are confined to flood plains and river remnants as they peter out in the desert.

Eucalyptus dichromophloia F. Muell. Chippendale 1605.

**Eucalyptus microtheca* F. Muell. Crocker (As *E. coolabah*) C6, C7, C12, C13, C16; Forde 1319; Boyland 298.

- Eucalyptus papuana* F. Muell. Forde 1290.
 **Eucalyptus terminalis* F. Muell. Crocker (as *E. pyrophora*) C3, C17, C18; Forde 1296; Must 93.
Melaleuca glomerata F. Muell. A small shrubby tree which like the Eucalypts above is largely confined to creeklines, rare in the desert. Chippendale 1637.
 **Thryptomene maisonneuvii* F. Muell. A small intricate shrub apparently rare. Crocker; Must 84.

BORAGINACEAE

- Heliotropium aspernum* R.Br. A colonial herbaceous perennial. ACB.27985.
 **Heliotropium pleiopterum* F. Muell. An erect annual or short-lived perennial. Must 118, 327.
Omphalolappula concava (F. Muell.) Brand. A small erect annual. Lothian 1516.
Plagiobothrys plurisepalus (F. Muell.) Johnston. A small prostrate annual herb. ACB.27904.
 **Trichodesma zeylanicum* (Burm.f.) R.Br. A stiff erect annual or short-lived perennial from a few centimetres to a metre high, common on deep sand on flats or slopes. Chippendale 1595, 4947, 6599; Lothian 1435, 1494, 1683, 1732, 1793, 1880; Symon 4374; Boyland 277; Must 83, ACB.27868.

CHLOANTHACEAE

A small family of shrubs. Examination of the herbarium specimens at AD and ADW suggests considerable confusion in their identification and when they are revised or more rigorously checked the following names may be changed.

- Dicrastylis costelloi* F. M. Bailey. A subshrub to 45 cm., rare in deep red sand between ridges. Chippendale 3955.
 **Dicrastylis doranii* F. Muell. including var. *eriantha*. Colonial small shrub occasional on interdune flats. Crocker C16-17; Lothian 1600, 1700, 1722; Symon 4342, 4388; ACB.27853.
Newcastelia cephalantha F. Muell. A rounded small shrub. Crocker C17.
Newcastelia spodioptricha F. Muell. A shrub or herbaceous perennial. ACB. 27852.

LAMIACEAE (LABIATAE)

- Teucrium racemosum* R.Br. An erect perennial herbaceous herb. Crocker C20; Forde 1330; Chippendale 2836; Boyland 307; ACB.27960.

SOLANACEAE

- Datura leichhardtii* F. Muell. ex Benth. An annual, infrequent in floodout. Chippendale 1632.
Nicotiana ingulba J. M. Black. An erect annual herb. Must 82.
Nicotiana velutina Wheeler. An erect annual herb locally common. Crocker C20, Chippendale 1615, 2832; Lothian 1499, 1641, 1771; Boyland 276; ACB.27910, 27958.
 **Solanum chenopodium* F. Muell. An erect, perennial, colonial undershrub, in interdune areas often under shade or shelter. Crocker C19; Forde 1289; Chippendale 1620.
 **Solanum coactiliferum* J. M. Black. A small colonial undershrub. Crocker C14.
 **Solanum ellipticum* R.Br. A sprawling colonial subshrub from interdune sands. Crocker C5; Chippendale 4956; Must 79.
 **Solanum esuriale* Lindl. A small herbaceous colonial perennial. Crocker C16; Must 90; ACB.27948.

Solanum quadriloculatum F. Muell. A small shrub collected from flood out. Chippendale 1591; ACB.27876.

Solanum sturtianum F. Muell. An erect, colonial, perennial, often associated with creeklines in arid areas. Chippendale 3947.

SCROPHULARIACEAE

Limosella australis R.Br. A very small sub-aquatic herb. ACB.28015A.

**Morgania glabra* R.Br. An erect perennial herb usually near water or creek-lines. Crocker C5; Chippendale 4949; ACB.27825, 27889, 27940.

Peplidium muelleri Benth. A sprawling herb. Lothian 1536; ACB.27903, 27905, 28003, 28005.

ACANTHIACEAE

Rostellularia pogonantha F. Muell. (*Justicia procumbens* non L. Robertson in Black 1957.) A small spreading erect perennial, along small water-course. Winkworth 667; Forde 1324; Chippendale 1645.

Ruellia corynotheca F. Muell. ex Benth. Fl.Austral. 4:546. A perennial herb or subshrub, not common. Forde 1325; Chippendale 1646.

MYOPORACEAE

Eremophila a genus of shrubs well developed in the arid areas of Australia. They range in size from smallish intricate shrubs flowering when only 20 cm. high to small trees.

Eremophila duttonii F. Muell. A small shrub common but scattered between sand ridges. Chippendale 6594; ACB.27807.

Eremophila freelingii F. Muell. A shrub to 2 m., common on a hill. Chippendale 1608; Lothian 1889.

**Eremophila latrobei* F. Muell. A grey shrub to 2 m, on rocky or hard soil. Crocker C2, C5, C18; Chippendale 1636; Lothian 1643; Must 334.

**Eremophila longifolia* (R.Br.) F. Muell. An erect colonial shrub or small tree. Crocker C3, C7, C8; Lothian 1466, 1640, 1714, 1884; Boyland 297; Symon 4398; Must 92; ACB.28017.

**Eremophila macdonnellii* F. Muell. A small shrub with grey foliage and fine purple flowers, common in deep sands. Crocker; Chippendale 1627, 4940, 6604; Lothian 1637, 1742; Boyland 287; Symon 4351, 4363; ACB.27849.

Eremophila maculata (Ker-Gawl) Muell. A shrub to 1 m. locally common in loamy soil. Chippendale 4942; ACB.27798, 28029.

Eremophila obovata L. Smith Proc.Roy.Soc.Q. 1956: 75, 33. A subshrub in deep red sand. Chippendale 1617, 2842; Must 91.

**Eremophila strehlowii* E. Pritzel. A small shrub. Crocker C12, C13.

**Eremophila strongylophylla* F. Muell. Apparently rare. Crocker C2, C5.

**Eremophila willsii* F. Muell. An erect shrub. Crocker C6, C7; Lothian 1616, 1739; Must 95.

PLANTAGINACEAE

**Plantago varia* R.Br. A small annual herb. Chippendale 2821; Lothian 10 numbers; Boyland 269; ACB.27842, 27901, 27921.

RUBIACEAE

**Oldenlandia pterospora* (F. Muell.) F. Muell. A small, erect, twiggy herb or short-lived perennial, locally common on deep sand. Symon 4344.

**Pomax umbellata* (Sol. et Gaertn.) Miq. A small undershrub. Lothian 1678.

Synaptantha tillaeacea (F. Muell.) Hook. f. A small slender annual. Lothian 1563, 1852; ACB.27942.

CUCURBITACEAE

- Citrullus colocynthis* (L.) Schrad. An alien perennial with a massive root system and herbaceous stems sprawling widely. Chippendale 4929.
Melothria maderaspatana (L.) Cogn. A scrambling vine, probably annual. Crocker C3; Must 87; ACB.27854.

CAMPANULACEAE

- **Lobelia heterophylla* Labill. Nov.Holl.Pl. 1.52.t.74. Locally common on interdune flats, the flowers are an attractive sky blue and the plants almost leafless at flowering. Chippendale 3953; Symon 4336.
Wahlenbergia gracilentia Lothian. An erect slender annual. Lothian 1538, 1539.
Wahlenbergia sieberi A.DC. A graceful herbaceous perennial. ACB.27946.

BRUNONIACEAE

- **Brunonia australis* Sm. An attractive annual or short-lived perennial herb, locally common on the flats. Crocker C5; Symon 4343.

GOODENIACEAE

- **Calogyne berardiana* (Gaudich.) F. Muell. An annual herb from hard stony flats. Crocker C2, C5; Lothian 1430, 1567, 1861, 1886; Must 63.
Goodenia argentea J. M. Black. A weak sprawling herb. Lothian 1535, 1834, 1853.
 **Goodenia cycloptera* R.Br. A sprawling annual or short-lived perennial herb. Locally very common on flats and upper slopes. Crocker C6; Lothian 8 numbers; Symon 4353; Must 109.
Goodenia glabra R.Br. An herbaceous perennial Must 61.
Goodenia heterochila F. Muell. A small sprawling perennial herb from the upper slope or dune crest. Winkworth 629; Forde 1285.
Goodenia lunata J. M. Black. A sprawling, colonial, herbaceous perennial. ACB.27789, 28028.
 **Goodenia mitchellii* Benth. A perennial herb collected from interdune flats. Chippendale 1601; Boyland 274; Must 328; ACB.27867.
 **Goodenia subintegra* F. Muell. ex Tate. A small perennial herb from sandy clay interdune flats. Boyland 305.
 **Lechenaultia divaricata* F. Muell. A small shrub forming rigid, intricate, rounded bushes on deep sands in interdune slopes. Crocker; Lothian 1603; Boyland 315; Symon 4381, 4349; ACB.27873.
 **Scaevola collaris* F. Muell. An undershrub from sandy clay at edge of a salt lake. Crocker C20; Boyland 231.
 **Scaevola depauperata* R.Br. Another rigid intricate small perennial from deep sands on the long slope of the dunes. Crocker C5, C8, C18; Lothian 1674, 1685; Symon 4380, 4352; Must 68.
 **Scaevola aemula* R.Br. A small spreading annual or perennial from depressions. Winkworth 670; Must 119.
 **Scaevola ovalifolia* R.Br. An erect undershrub. Crocker C3, C20; Chippendale 4935; Lothian 1481, 1781, 1875; Boyland 272.
 **Velleia connata* F. Muell. An erect annual, scattered plants from deep sand. Symon 4335.

ASTERACEAE (COMPOSITAE)

- **Angianthus pusillus* (Benth.) Benth. A small ephemeral herb. Lothian 1415, 1474, 1597, 1692, 1746, 1823; ACB.27937

- **Brachyscome iberidifolia* Benth. An annual herb. Lothian 1434, 1754, 1795, 1822.
- **Calotis erinacea* Steetz. A tough, herbaceous perennial from the upper slopes of the dunes. Crocker C7; Lothian 1620, 1668, 1741; Symon 4340; Must 71; ACB.27843A, 28036.
- **Calotis hispidula* (F. Muell.) F. Muell. A small ephemeral on the interdune flats. Lothian 1547, 1854; Symon 4402; ACB.27782, 27890, 27966.
- **Calotis multicaulis* (Turcz.) Druce. An annual herb on clayey sandy soils on interdune flats. Lothian 1530, 1560, 1897; Boyland 296; ACB.27832, 28000.
- Calocephalus knappii* (F. Muell.) Ewart & White. An erect annual on swale flats. Must 74, 318.
- Calocephalus platycephalus* (F. Muell.) (Benth.). A small annual. Chippendale 6574.
- Centipeda cunninghamii* (DC) A.Br. et Aschers. A small annual or perennial herb. ACB.27953.
- Centipeda thespidioides* F. Muell. A small prostrate herb often on flooded sites. Lothian 1541 1577; ACB.27841, 27994.
- **Craspedia chrysantha* (Schlecht.) Benth. A small annual, occasional patches on the flats. Winkworth 660; Symon 4361.
- **Gnephosis eriocarpa* (F. Muell.) Benth. A small annual. Chippendale 2839, 6592; Lothian 1426, 1550, 1841; Boyland 272A; ACB.27785, 27836.
- Gnephosis foliata* (Sond.) Eichler. A small annual herb. Chippendale 2849, 3952, 6593; Lothian 1553, 1870; ACB.27797, 28023.
- **Gnephosis skirrophora* (Sond. et F. Muell.) Benth. A small annual herb. Boyland 236A.
- **Helichrysum ambiguum* var. *paucisetum* J. M. Black. A perennial herb. Crocker C13; Lothian 1450, 1602, 1675, 1740.
- Helichrysum cassinianum* Gaudich. An erect annual. Winkworth 666; Must 64; ACB.27851.
- **Helichrysum davenportii* F. Muell. An erect annual. Crocker (as *H. roseum* var.) C8; Must 62.
- Helichrysum lindleyi* Eichler. An erect annual. ACB.28027.
- Helichrysum semifertile* F. Muell. A small annual on clayey sandy soil on interdune flats. Boyland 294; ACB.28025.
- **Helipterum floribundum* DC. A small annual at times very abundant on interdune flats. Crocker C2; Winkworth 643; Chippendale 1611, 6575; Lothian 1425, 1520, 1585, 1625, 1770, 1846, 1869; Boyland 268; ACB.27900, 28026.
- Helipterum charsleyae* F. Muell. An erect annual. Crocker C4-C5; Winkworth 662; Must 70; ACB.27988.
- Helipterum microglossum* (F. Muell. ex Benth.) Maiden and Bette. A small sprawling annual. Lothian 1836, 1898.
- **Helipterum moschatum* (A. Cunn. ex DC.) Benth. An erect annual. Crocker C4, C8; Lothian 1437, 1480, 1584, 1609, 1635, 1679, 1737, 1763, 1766, 1791, 1881; Boyland 261; Must 316; ACB.27755, 27934.
- Helipterum pterochaetum* (F. Muell.) Benth. A perennial herb. Crocker C4; Chippendale 1648, 6598; Must 111.
- Helipterum stipitatum* (F. Muell.) F. Muell. ex Benth. Crocker C4-C5; Winkworth 665; Must 89.
- Helipterum strictum* (Lindl.) Benth. A small annual. Chippendale 1638; Lothian 1529, 1545, 1586.
- **Helipterum tietkensisii* F. Muell. An erect annual, scattered plants on the flats. Chippendale 2840; Symon 4334.

- Ixiolaena leptolepis* (DC.) Benth. A small annual. Chippendale 1538; Lothian 1529, 1545, 1586.
- Ixiolaena tomentosa* Sond. & F. Muell. ex Sond. A perennial herb. ACB.27907.
- Millotia greevesii* F. Muell. A small annual. Boyland 267.
- Minuria denticulata* (DC.) Benth. A small perennial. Chippendale 2835; ACB.27887, 27927, 27949, 27987.
- Minuria leptophylla* DC. A small undershrub. Chippendale 2844; Must 78, 319.
- **Myriocephalus stuartii* (F. Muell. and Sond. ex Sond.) Benth. An annual, very common and widely spread in almost all sites except the mobile dune crests, repeatedly collected. Winkworth 651; Chippendale 1598, 2838, 6576; Lothian 1495, 1579, 1611, 1669, 1728, 1756, 1768, 1784, 1879; Boyland 273; Symon 4338; Must 72; ACB.27761, 27844.
- **Podocoma nana* Ewart & White. A small prostrate annual. Lothian 1623.
- **Podolepis canescens* A. Cunn. ex DC. An erect annual, occasional plants on the flats. Lothian 1423, 1703, 1894; Symon 4333.
- Podolepis capillaris* (Steetz) Diels. A slender erect annual. ACB.27932, 27983.
- Pterigeron dentatifolius* F. Muell. A small annual. Lothian 1515, 1590.
- Pterigeron liatroides* (Turcz.) Benth. An erect rigid perennial herb. ACB. 28021.
- Pterocaulon sphacelatum* (Labill.) Benth. & Hook. A stiff erect undershrub. Chippendale 1631, 4934.
- Rutidosis helichrysoides* DC. An erect perennial. Chippendale 4939; Lothian 1552; Must 340; ACB.27986.
- **Senecio gregorii* F. Muell. An erect annual, common on flats and slopes, widely collected. Crocker C3, C4; Winkworth 644; Chippendale 1597, 2837; Boyland 275; Must 66; ACB.27760.
- **Senecio lautus* Sol. An annual or short-lived perennial herb. Crocker C20; Symon 4339; Lothian 1436, 1482, 1566, 1608, 1632, 1689, 1758, 1769, 1785, 1878.
- **Waitzia citrina* (Benth.) Steetz. in Lehm. Pl. Preiss 1, 454. An erect annual locally plentiful on the flats. Symon 4403.

APPENDIX

PLANTS FROM THE UPPER SLOPES OR DUNE CRESTS

POACEAE

Plagiosetum refractum
Eriachne aristidea
Zygochloa paradoxa

CHENOPODIACEAE

Rhagodia spinescens var. *deltophylla*
Salsola kali

AMARANTACEAE

Ptilotus latifolius
Ptilotus polystachys

AIZOACEAE

Trianthema pilosa

PORTULACACEAE

Calandrinia spp.
Portulacca intraterranea

BRASSICACEAE

Blennodia pterosperma

MIMOSACEAE

Acacia ligulata
Acacia dictyophleba

CAESALPINIACEAE

Cassia pleurocarpa

FABACEAE

Crotalaria cunninghamii
Crotalaria dissitiflora
Psoralea eriantha
Swainsona rigida
Tephrosia purpurea

ZYGOPHYLLACEAE

Tribulus hystrix

EUPHORBIACEAE

Euphorbia wheeleri

BORAGINACEAE

Trichodesma zeylanicum

GOODENIACEAE

Goodenia cycloptera

ASTERACEAE

Calotis erinacea
Myriocephalus stuartii

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